

EXPLANATION

This map is intended to serve as an aid in reconnaissance evaluation of unconsolidated materials and can be used to identify areas of potential interest.

The units on this map indicate the first material of substantial thickness (generally greater than 3 feet) encountered beneath the soil layer. The soil layer (commonly a foot or two thick) is not mapped. Other materials, different in composition, may underlie each map unit (see cross sections) or may occur as minor lenses within each map unit.

THIS MAP SHOULD NOT BE USED AS A SUBSTITUTE FOR ONSITE INVESTIGATION.

Most unconsolidated materials are mixtures of the three particle-size classes defined in the diagram below. This diagram also relates these three size classifications to the Wentworth classification (Wentworth, 1922) which can be compared with other classifications used in engineering and soil science.

PARTICLE-SIZE CLASSIFICATION					
(Classification used in this report)					
(Diameter, in inches)					
COARSE		MEDIUM		FINE	
Boulders	Pebbles	Gravel	Sand	Silt	Clay
12"	4"	2"	1/16"	1/64"	1/256"
Wentworth classification					
(Diameter, in millimeters)					
120	47.5	20	2.0	0.075	0.0039

Materials mapping involves a visual estimate of particle-size distribution in a deposit by the field geologist. Percentages of particle sizes therefore may vary somewhat from place to place beyond the limits defined in the map units below.

sg

SAND AND GRAVEL

Particle sizes range from 100 percent coarse to 25 percent coarse and 75 percent medium

s

SAND

Particle sizes range from 25 percent coarse and 75 percent medium through 100 percent medium to 50 percent medium and 50 percent fine

f

VERY FINE SAND, SILT, AND CLAY

Particle sizes range from 50 percent medium and 50 percent fine to 100 percent fine. Occurs as regularly bedded, alternating, discrete layers of silt with some sand and clay, or as thick, massive beds of clay with only minor amounts of sand and silt. May also be poorly sorted, very fine sand, silt, and clay. Locally contains scattered particles

t

TILL

Particle sizes range from coarse to fine in varying proportions. Some till, averaging less than 10 feet thick, is sandy, loose, and very stony; other till (hardpan), commonly more than 10 feet thick, is less sandy, very compact, and less stony. Where these tills occur together, the sandy, loose till is always on top

sw

SWAMP DEPOSITS

Undecomposed to partly decomposed organic matter, generally mixed or interbedded with varying amounts of fine, medium, and coarse particles. Extent and thickness of most swamp deposits is poorly known

sr

SLIDE ROCK (TALUS)

Large angular rock fragments at the base of cliffs; locally contains organic matter and silt

af/aft

ARTIFICIAL FILL

Fill for highways, solid-waste disposal, and other major construction
af, predominantly earth fill
aft, predominantly trash fill

bedrock

BEDROCK OUTCROP (LEDGE)

Bedrock exposed at ground surface; may be partly covered by thin soil. Ruled pattern shows areas of abundant, closely-spaced outcrops too small to be mapped individually. (Also includes small sliderock deposits.) For additional information see Flint, 1964

w

WATER BODIES

In general, lakes and ponds greater than 5 acres or wider than 200 feet

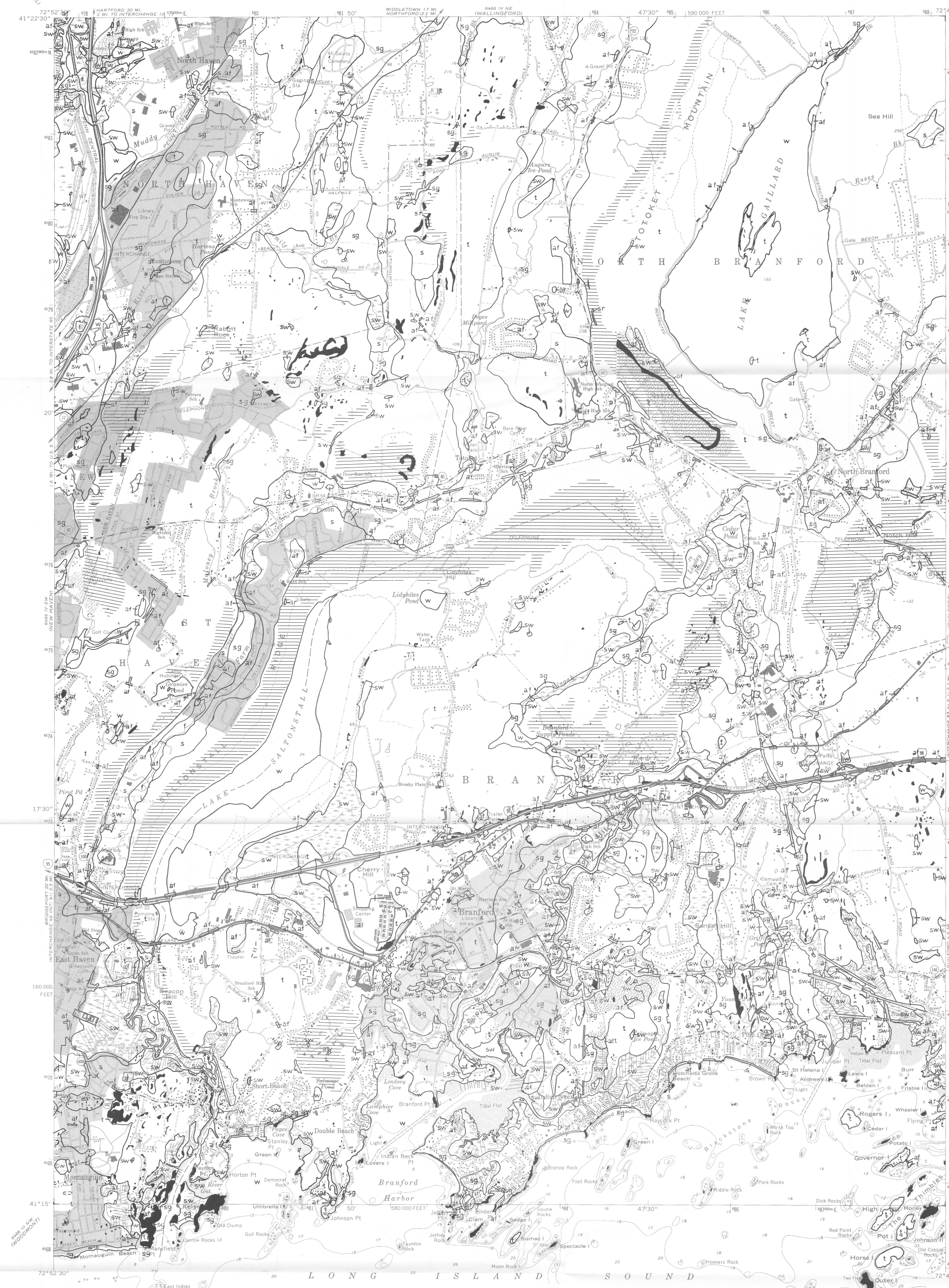
dev

DEVELOPED LAND

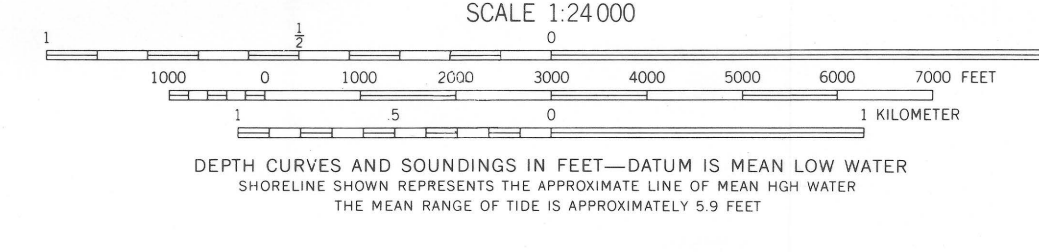
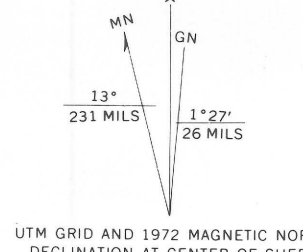
Natural conditions extensively altered by man; limits poorly known. Cut-and-fill associated with construction, parking areas, and general grading is widespread. Fill of variable thickness and extent commonly overlies the natural materials shown on the map

REFERENCES

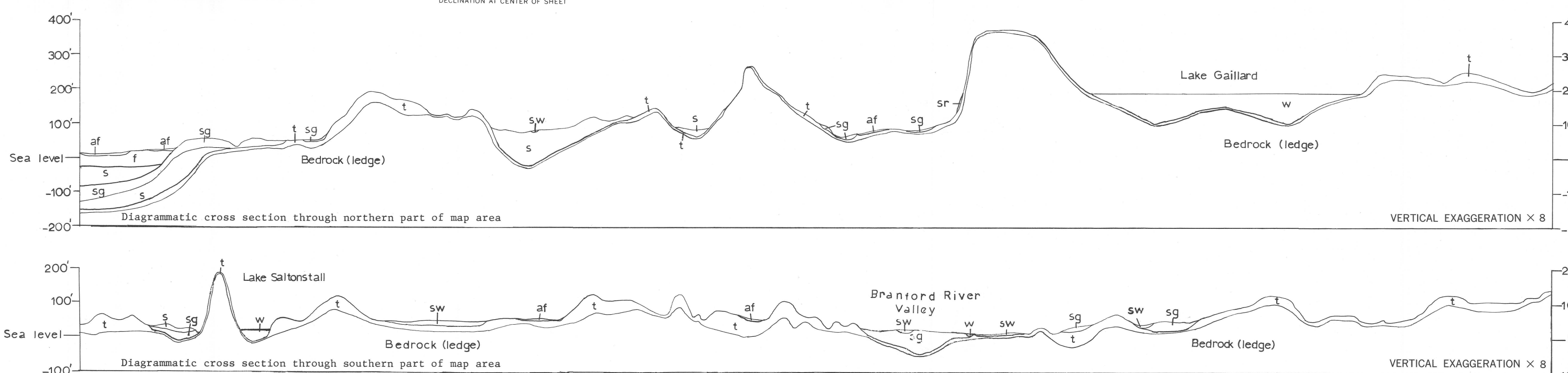
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Base from U.S. Geological Survey, 1967; photorevised 1972
10,000-foot grid based on Connecticut coordinate system
1,000-meter Universal Transverse Mercator grid ticks, zone 18



Modified from a published geologic map (Flint, 1964) with materials-texture information and additional interpretation and field work by C. F. Brown, 1972-73



MAP SHOWING UNCONSOLIDATED MATERIALS, BRANFORD QUADRANGLE, CONNECTICUT

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